Claims:

This listing of original claims is provided for convenience and contains no amendments.

Listing of Claims:

1. (Currently Amended) A system for communication monitoring in a mobile radio network comprising:

   a processing device coupled to multiple links in the mobile radio network, the processing device (i) determining from data transferred via the multiple links current deciphering parameters and (ii) deciphering the data using the current deciphering parameters to produce deciphered data;

   a deciphering parameter providing device coupled to the processing device in which the current deciphering parameters are filed by the processing device to be available for another processing device upon request;

   a deciphered data providing device coupled to the processing device for providing the deciphered data at an output for protocol analysis, or procedure trace to be performed on deciphered data;

   wherein the processing device, deciphering parameter providing device and deciphered data providing device are distributed over different locations and are coupled together by a communication link.

2. (Original) The system as recited in claim 1 wherein the communication link comprises one selected from the group consisting of a local area network and a wide area network.

3. (Original) The system as recited in claim 1 wherein the processing means deciphers data on first ones of the multiple links using an additional deciphering parameter extracted from the data, the data being in the form of packet data units, the additional deciphering parameter being a set of parameters obtained from a subscriber data base entity, from the data flow of the connection, and from each packet data unit as the sequence number of the packet data units.

4. (Original) The system as recited in claim 1 where the data includes both unciphered and ciphered data and the processing device comprises:

      means for deciphering the ciphered data according to the current deciphering parameters; and

      means for combining the unciphered data and the deciphered ciphered data to produce an ordered data flow as the deciphered data.

5. (Original) The system as recited in claim 4 wherein the combining means comprises a delay device for delaying the unciphered data while the deciphering means deciphers the ciphered data so the deciphered data is in the ordered data flow with the unciphered data.

6. (Original) The system as recited in claim 1 wherein the processing device comprises a memory coupled to the deciphering parameter providing device for storing deciphering parameters provided by the deciphering parameter providing device.

7. (Original) The system as recited in claim 1 wherein the processing device comprises a plurality of processors operating in parallel with the deciphering parameter providing device and deciphered data providing device, the number of processors being sufficient to cover all the multiple links at a serving switching entity.

8. (Currently Amended) A method of communication monitoring in a mobile radio network comprising the steps of:

> determining in a processing device from data transferred via multiple links of the mobile radio network coupled to the processing device current deciphering parameters;

> deciphering in the processing device the data using the current deciphering parameters to produce deciphered data;

> filing by the processing device the current deciphering parameters in a deciphering parameter providing device coupled to the processing device so that the current deciphering parameters are available for another processing device upon request;

> providing the deciphered data at an output of a deciphered data providing device coupled to the processing device;

> performing protocol analysis, or procedure trace on the deciphered data;

> wherein the processing device, deciphering parameter providing device and deciphered data providing device are distributed over different locations and are coupled together by a communication link.

9. (Original) The method as recited in claim 8 wherein the communication link comprises one selected from the group consisting of a local area network and a wide area network.

10. (Original) The method as recited in claim 8 wherein the deciphering step comprises the step of deciphering data on first ones of the multiple links using an additional deciphering parameter extracted from the data, the data being in the form of packet data units, the additional deciphering parameter being a set of parameters obtained from a subscriber data base entity, from the data flow of the connection, and from each packet data unit as the sequence number of the packet data units.

11. (Original) The method as recited in claim 8 where the data includes both unciphered and ciphered data and the deciphering step comprises the steps of:

deciphering the ciphered data according to the current deciphering
parameters; and

means for combining the unciphered data and the deciphered
ciphered data to produce an ordered data flow as the deciphered data.

12. (Original) The method as recited in claim 11 wherein the combining step comprises
the step of delaying the unciphered data while the deciphering step deciphers the
ciphered data so the deciphered data is in the ordered data flow with the unciphered
data.

13. (Original) The method as recited in claim 8 wherein the filing step comprises the
step of storing deciphering parameters provided by the deciphering parameter providing
device in a memory coupled to the deciphering parameter providing device.

14. (Original) The method as recited in claim 8 wherein the processing device
comprises a plurality of processors operating in parallel with the deciphering parameter
providing device and deciphered data providing device, the number of processors being
sufficient to cover all the multiple links at a serving switching entity.